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(71) Applicant (for all designated States except US): SEMI-CONDUCTOR IDEAS TO THE MARKET (ITOM) B.V. [NL/NL]; Drielindendreef 53, NL-4839 AH Breda (NL).

(72) Inventor; and

(75) Inventor/Applicant (for US only): KASPERKOVITZ, Wolfdietrich, Georg [NL/NL]; Eikenlaan 4, NL-5581 HA Waalre (NL).

(74) Agent: VAN STRAATEN, Joop; Octrooibureau van Straaten, Mgr. Bosstraat 22, NL-5401 EB Uden (NL).

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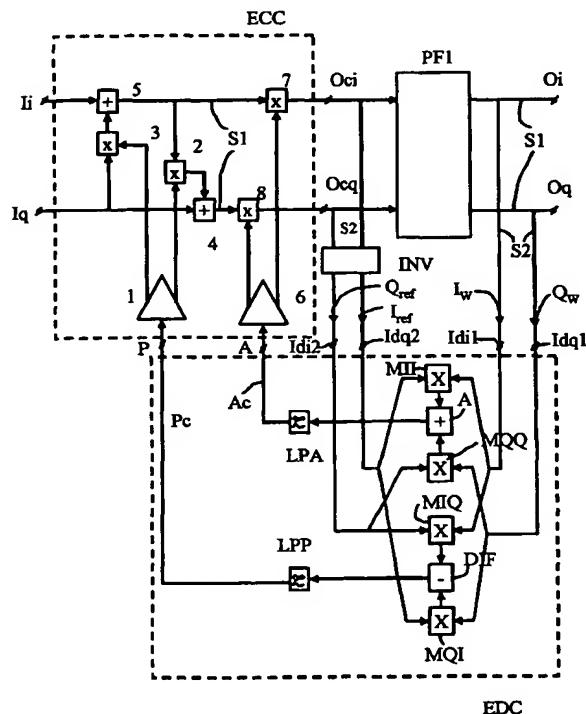
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(54) Title: MIRROR SUPPRESSION CIRCUIT IN A QUADRATURE DEMODULATOR



(57) Abstract: Mirror suppression circuit and receiver using such mirror suppression circuit comprising a first quadrature signal path coupled between quadrature signal input and output terminals and including an error correction circuit for correction of amplitude and phase errors in a carrier modulated quadrature signal comprising a pair of in-phase and phase quadrature signal components. To obtain a suppression of both amplitude and phase imbalance of said carrier modulated quadrature signal as well as signal amplitude variations, a quadrature output of said error correction circuit being coupled through a first filter circuit for a selection of said quadrature signal to a first quadrature input of an error detection circuit, said first quadrature signal path being coupled prior to said first filter circuit through a second quadrature signal path to a second quadrature input of said error detection circuit, said error detection circuit detecting amplitude and phase errors and providing amplitude and phase control signals to amplitude and phase control inputs of said error correction circuit for a negative feed back of said amplitude and phase errors to said error correction circuit, said amplitude control signal varying with at least one of products  $I_w \cdot I_{ref}$  and  $Q_w \cdot Q_{ref}$  and said phase control signal varying with at least one of products  $I_w \cdot Q_{ref}$  and  $Q_w \cdot I_{ref}$ ,  $I_w$  and  $Q_w$ , respectively  $I_{ref}$  and  $Q_{ref}$ , representing the in-phase and phase quadrature signal components of said quadrature signal at the first quadrature input of the error detection circuit, respectively the in-phase and phase quadrature signal components of a quadrature reference signal occurring at the negative carrier frequency of said quadrature signal at the second quadrature input of the error detection circuit.



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## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

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## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 343 273 A (DEUTSCHE ITT GMBH) 29 November 1989 (1989-11-29) page 3, line 31 - line 48 page 7, line 56 - page 8, line 14 -----	1
A	WO 99/23756 A (LM.ERICSSON) 14 May 1999 (1999-05-14) page 5, line 7 - line 19; figure 2 page 10, line 7 - page 11, line 16 page 16, line 4 - page 18, line 14; figure 3 -----	1
A	EP 1 168 597 A (NTT DOCOMO INC) 2 January 2002 (2002-01-02) page 7, line 57 - page 8, line 32; figures 4,17,34 ----- -/-	1

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Name and mailing address of the ISA  
European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Butler, N

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Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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